Practical Course Information Systems

Data-intensive Computing in a Cloud-based Infrastructure

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ECTS: 6

Description
This practical course mainly focuses on data-intensive applications and how they process and store their data. Nowadays, the amount of data in applications is growing intensely. This data can be either structured, e.g., stored in relational database systems such as MySQL, or unstructured, e.g., stored in text documents, pictures or other media files. Deriving information and, as a consequence, knowledge from this data is a huge challenge. To cope with this issue, new data analytics and data storage technologies have been developed that focus on the one hand on deriving information from this large amount of structured and unstructured data (e.g., data mining, natural language processing, ...) and on the other hand on efficient data storage (e.g., NoSQL databases, column-stores, ...). Furthermore, to enable fast, efficient application development as well as a high degree of accessibility, flexibility and scalability, cloud computing platforms are oftentimes used to implement such applications.

In this practical course, you will implement a data-intensive application based on tasks that involve data analysis, data storage and efficient data processing. The development will be done as web application based on a cloud-based infrastructure (IBM Bluemix). You will use various predefined services of the infrastructure for management and analysis of data and you will parameterize, combine and extend them to provide the desired application. You will also learn about the theory behind the analysis tasks.

Remarks

- This course is primarily offered for students of Master Computer Science (STE). Students from the Master programmes Informatik and Softwaretechnik as well as of Diplom Informatik and Softwaretechnik may participate as well.
- Participants will work in small teams.

Prerequisites
Basic knowledge on database systems and information systems.

Further Information
http://www.ipvs.uni-stuttgart.de/abteilungen/as/lehre/lehrveranstaltungen/fachpraktika/WS1516/DBP?__locale=en